

Blood Bank Management System

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1. PHASE I

1.1. ER DIAGRAM

The ER diagram for the Blood Bank Management System comprehensively illustrates the various entities involved and their intricate relationships, forming the basis for a robust and efficient system. The central entity is the Person, which includes attributes such as First Name, Middle Name, Last Name, Address, Date of Birth (DOB), Age, and Contact details. A person can register with multiple donation centers, indicating a many-to-many (M:N) relationship. Further specialization within the entity allows a person to be classified as either a Donor or a Receiver.

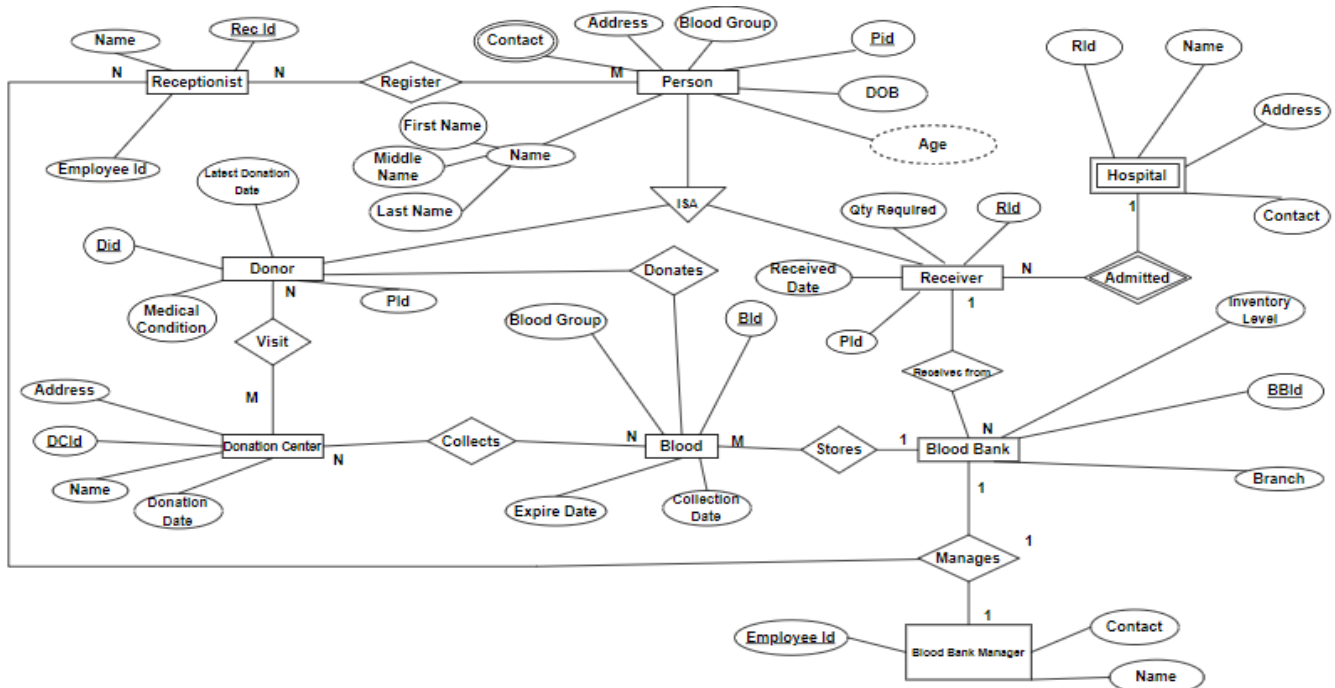
The Donor entity, identified by a unique Donor ID (DID), also records the donor's medical condition and latest donation date. Donors have a many-to-many relationship with blood groups and can visit various donation centers. The Receiver entity, identified by a Receiver ID (RID), includes attributes such as Name, Address, Contact, DOB, Age, and Quantity Required, reflecting the specific requirements of patients in need of blood.

Blood, as a critical entity, includes attributes like Blood ID (BID), Collection Date, and Expiry Date. Blood donations are collected by donation centers and stored in blood banks, establishing a complex many-to-many relationship with both donation centers and donors. Each unit of blood is eventually assigned to a receiver, reinforcing a many-to-one (N:1) relationship.

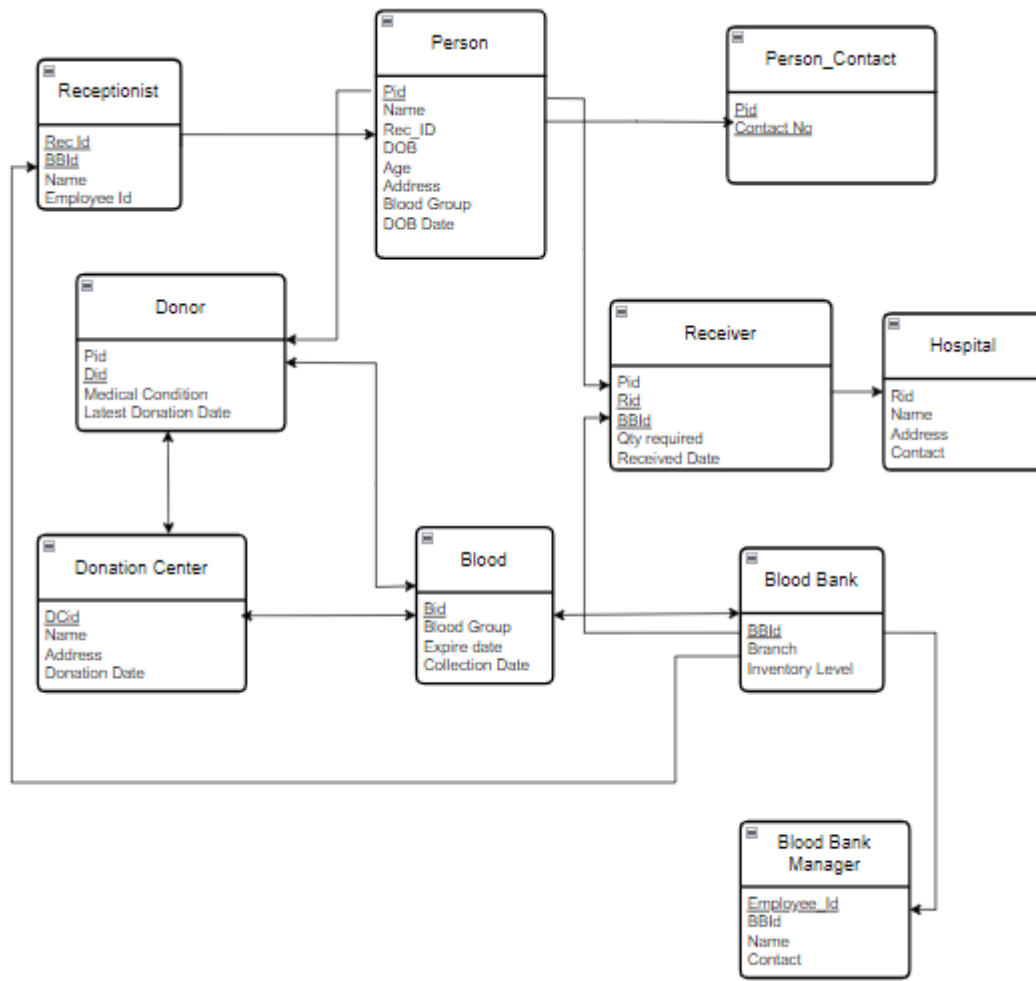
Donation Centers, identified by a Donation Center ID (DCId), maintain attributes such as Name and Address. These centers play a crucial role in collecting blood from donors. They operate under the management of Blood Banks, which are identified by a Blood Bank ID (BBId) and include attributes such as Branch and Inventory Level. Blood banks manage multiple donation centers and store blood units, which are later supplied to hospitals.

The Hospital entity, identified by a Hospital ID (RId), encompasses attributes like Name, Address, and Contact. Hospitals admit receivers (patients) and maintain an inventory of blood supplied by various blood banks, signifying a many-to-many relationship. Receptionists, identified by a Receptionist ID (Rec Id), are responsible for registering persons, forming a many-to-many relationship with the Person entity.

This ER diagram not only captures the fundamental entities and their attributes but also details the relationships necessary for an efficient blood donation and distribution process. By mapping out these connections, the system ensures seamless interaction between donors, donation centers, blood banks, hospitals, and receivers, ultimately facilitating effective blood management and distribution.



1.2. Reducing ER into table



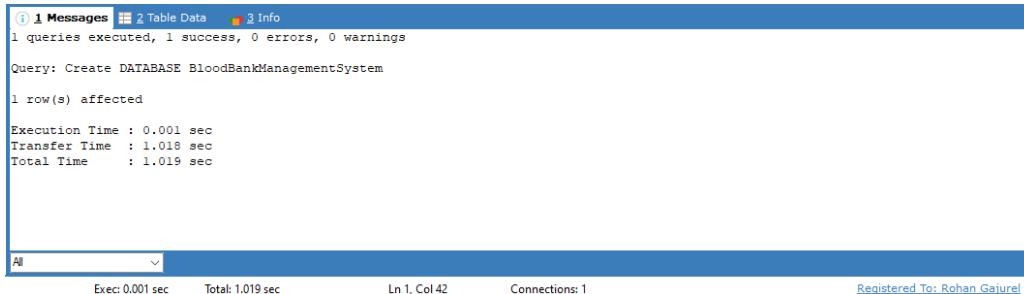
2. PHASE II

2.1. DDL Command DB and Table Creation

2.1.1. Creating Database BloodBankManagementSystem

Create DATABASE BloodBankManagementSystem

Output



The screenshot shows a SQL execution window with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area displays the following text: '1 queries executed, 1 success, 0 errors, 0 warnings', 'Query: Create DATABASE BloodBankManagementSystem', '1 row(s) affected', 'Execution Time : 0.001 sec', 'Transfer Time : 1.018 sec', and 'Total Time : 1.019 sec'. At the bottom, there is a status bar with 'Exec: 0.001 sec', 'Total: 1.019 sec', 'Ln 1, Col 42', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

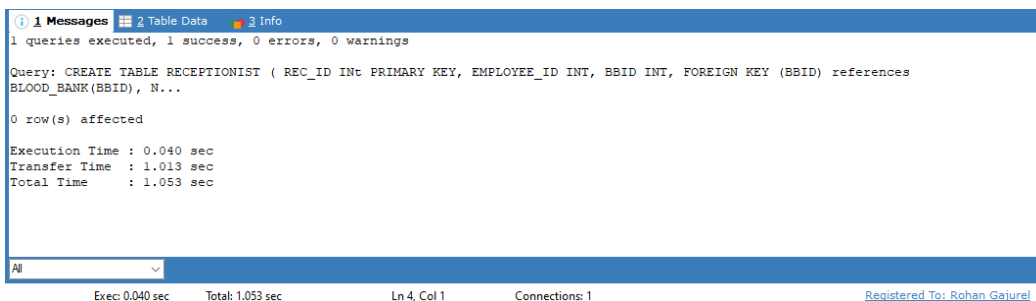
```
1 queries executed, 1 success, 0 errors, 0 warnings
Query: Create DATABASE BloodBankManagementSystem
1 row(s) affected
Execution Time : 0.001 sec
Transfer Time : 1.018 sec
Total Time : 1.019 sec
```

2.1.2. Receptionist Table

CREATE TABLE RECEPTIONIST

```
(
REC_ID INT PRIMARY KEY,
EMPLOYEE_ID INT,
BBID INT, FOREIGN KEY (BBID) REFERENCES
BLOOD_BANK(BBID),
NAME VARCHAR(100)
);
```

Output



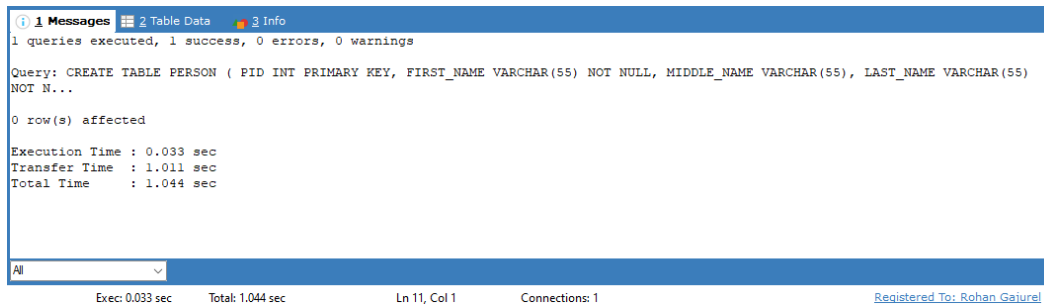
The screenshot shows a SQL execution window with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area displays the following text: '1 queries executed, 1 success, 0 errors, 0 warnings', 'Query: CREATE TABLE RECEPTIONIST (REC_ID INT PRIMARY KEY, EMPLOYEE_ID INT, BBID INT, FOREIGN KEY (BBID) references BLOOD_BANK(BBID), N...', '0 row(s) affected', 'Execution Time : 0.040 sec', 'Transfer Time : 1.013 sec', and 'Total Time : 1.053 sec'. At the bottom, there is a status bar with 'Exec: 0.040 sec', 'Total: 1.053 sec', 'Ln 4, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

```
1 queries executed, 1 success, 0 errors, 0 warnings
Query: CREATE TABLE RECEPTIONIST ( REC_ID INT PRIMARY KEY, EMPLOYEE_ID INT, BBID INT, FOREIGN KEY (BBID) references
BLOOD_BANK(BBID), N...
0 row(s) affected
Execution Time : 0.040 sec
Transfer Time : 1.013 sec
Total Time : 1.053 sec
```


2.1.3. Person Table

```
CREATE TABLE PERSON (  
    PID INT PRIMARY KEY,  
    FIRST_NAME VARCHAR(55) NOT NULL,  
    MIDDLE_NAME VARCHAR(55),  
    LAST_NAME VARCHAR(55) NOT NULL,  
    GENDER CHAR(1) CHECK (gender IN ('M', 'F', 'O')),  
    ADDRESS VARCHAR(55) NOT NULL,  
    BLOOD_GROUP VARCHAR(5) NOT NULL,  
    DOB DATE NOT NULL  
);
```

Output



The screenshot shows a database client window with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area displays the following text:

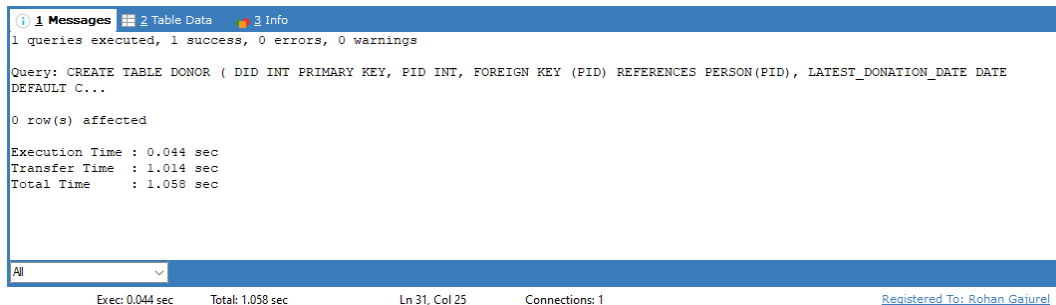
```
1 queries executed, 1 success, 0 errors, 0 warnings  
Query: CREATE TABLE PERSON ( PID INT PRIMARY KEY, FIRST_NAME VARCHAR(55) NOT NULL, MIDDLE_NAME VARCHAR(55), LAST_NAME VARCHAR(55)  
NOT N...  
0 row(s) affected  
Execution Time : 0.033 sec  
Transfer Time : 1.011 sec  
Total Time : 1.044 sec
```

At the bottom, there is a status bar with a dropdown menu set to 'All'. To the right of the dropdown, it shows 'Exec: 0.033 sec', 'Total: 1.044 sec', 'Ln 11, Col 1', and 'Connections: 1'. On the far right, there is a link that says 'Registered To: Rohan Gajurel'.

2.1.4. Donor Tabe

```
CREATE TABLE DONOR (  
  
    DID INT PRIMARY KEY,  
  
    PID INT,  
  
    FOREIGN KEY (PID) REFERENCES PERSON(PID),  
  
    LATEST_DONATION_DATE DATE DEFAULT  
CURRENT_TIMESTAMP,  
  
    MEDICAL_CONDITION VARCHAR(30)  
  
);
```

Output



2.1.5. Receiver Table

```
CREATE TABLE RECEIVER(  
  RID INT PRIMARY KEY,  
  PID INT,  
  FOREIGN KEY (PID) REFERENCES PERSON(PID),  
  BBID INT,  
  FOREIGN KEY(BBID) REFERENCES BLOOD_BANK(BBID),  
  RECIVED_DATE DATE DEFAULT NOW(),  
  QTY_REQUIRED VARCHAR(30)  
)
```

Output

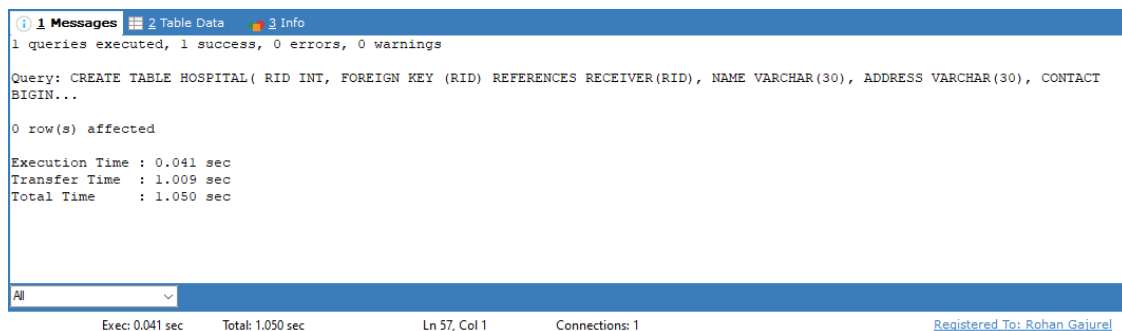
The screenshot displays a database management interface with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area shows the execution results of a SQL query. The query text is: 'Query: CREATE TABLE RECEIVER(RID INT PRIMARY KEY, PID INT, FOREIGN KEY (PID) REFERENCES PERSON(PID), BBID INT, FOREIGN KEY(BBID) REFER...'. The results indicate '0 row(s) affected'. Performance metrics are listed: 'Execution Time : 0.041 sec', 'Transfer Time : 1.011 sec', and 'Total Time : 1.052 sec'. At the bottom, a status bar shows 'Exec: 0.041 sec', 'Total: 1.052 sec', 'Ln 29, Col 1', 'Connections: 1', and a registration notice: 'Registered To: Rohan Gajurel'.

1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings
Query: CREATE TABLE RECEIVER(RID INT PRIMARY KEY, PID INT, FOREIGN KEY (PID) REFERENCES PERSON(PID), BBID INT, FOREIGN KEY(BBID) REFER...
0 row(s) affected
Execution Time : 0.041 sec
Transfer Time : 1.011 sec
Total Time : 1.052 sec
All
Exec: 0.041 sec Total: 1.052 sec Ln 29, Col 1 Connections: 1 Registered To: Rohan Gajurel

2.1.6. Hospital Table

```
CREATE TABLE HOSPITAL(  
RID INT,  
FOREIGN KEY (RID) REFERENCES RECEIVER(RID),  
NAME VARCHAR(30),  
ADDRESS VARCHAR(30),  
CONTACT BIGINT  
);
```

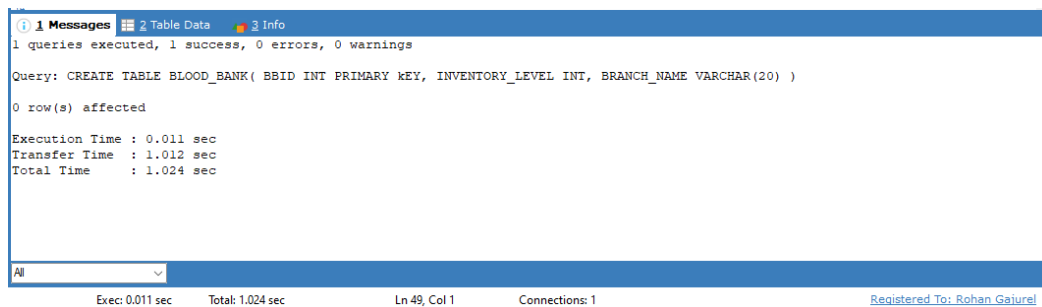
Output



2.1.7. Blood_Bank Table

```
CREATE TABLE BLOOD_BANK(  
  
BBID INT PRIMARY KEY,  
  
INVENTORY_LEVEL INT,  
  
BRANCH_NAME VARCHAR(20)  
  
);
```

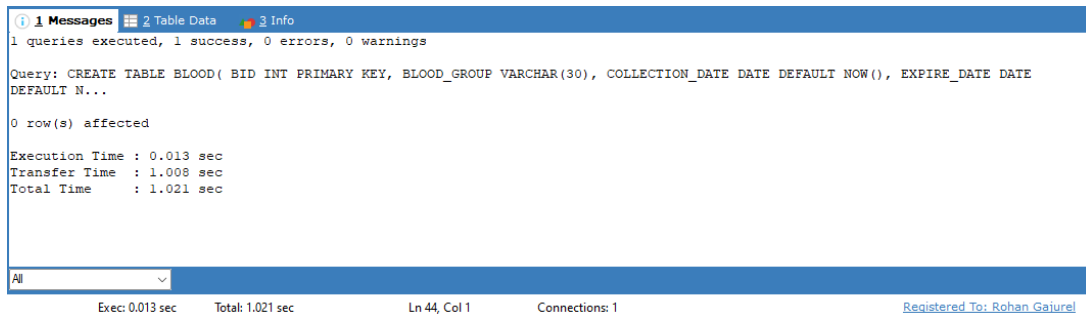
Output



2.1.8. Blood Table

```
CREATE TABLE BLOOD(  
  
BID INT PRIMARY KEY,  
  
BLOOD_GROUP VARCHAR(30),  
  
COLLECTION_DATE DATE DEFAULT NOW(),  
  
EXPIRE_DATE DATE DEFAULT NOW()  
  
)
```

Output



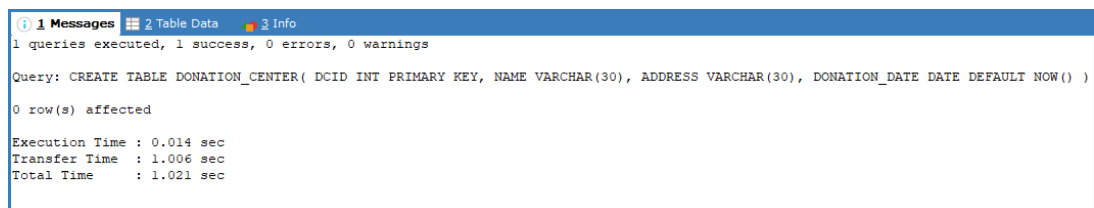
The screenshot displays a database client window with a blue header bar containing tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, showing a status bar at the top that reads '1 queries executed, 1 success, 0 errors, 0 warnings'. The main area contains the following text: 'Query: CREATE TABLE BLOOD(BID INT PRIMARY KEY, BLOOD_GROUP VARCHAR(30), COLLECTION_DATE DATE DEFAULT NOW(), EXPIRE_DATE DATE DEFAULT N...', '0 row(s) affected', and performance metrics: 'Execution Time : 0.013 sec', 'Transfer Time : 1.008 sec', and 'Total Time : 1.021 sec'. A dropdown menu at the bottom left is set to 'All'. The bottom status bar shows 'Exec: 0.013 sec', 'Total: 1.021 sec', 'Ln 44, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

1 Messages 2 Table Data 1 Info
1 queries executed, 1 success, 0 errors, 0 warnings
Query: CREATE TABLE BLOOD(BID INT PRIMARY KEY, BLOOD_GROUP VARCHAR(30), COLLECTION_DATE DATE DEFAULT NOW(), EXPIRE_DATE DATE DEFAULT N...
0 row(s) affected
Execution Time : 0.013 sec
Transfer Time : 1.008 sec
Total Time : 1.021 sec
All
Exec: 0.013 sec Total: 1.021 sec Ln 44, Col 1 Connections: 1 [Registered To: Rohan Gajurel](#)

2.1.9. Donation_Center Table

```
CREATE TABLE DONATION_CENTER(  
DCID INT PRIMARY KEY,  
NAME VARCHAR(30),  
ADDRESS VARCHAR(30),  
DONATION_DATE DATE DEFAULT NOW()  
)
```

Output



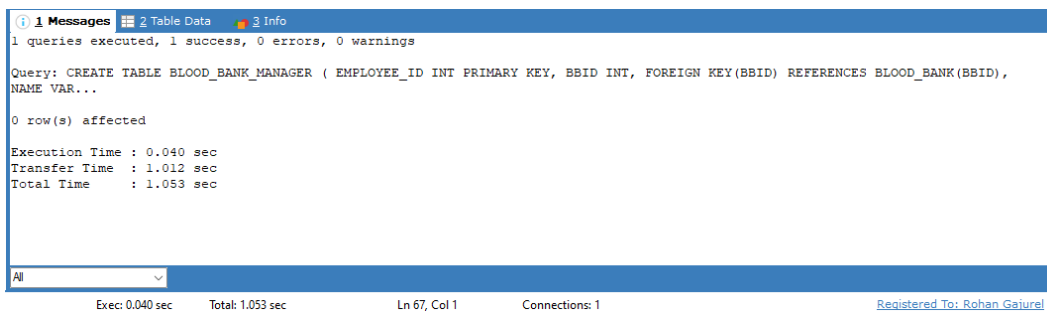
The screenshot shows a database client window with a blue header bar containing tabs for '1 Messages', '2 Table Data', and '2 Info'. The 'Messages' tab is active, displaying the following text: '1 queries executed, 1 success, 0 errors, 0 warnings'. Below this, the executed query is shown: 'Query: CREATE TABLE DONATION_CENTER(DCID INT PRIMARY KEY, NAME VARCHAR(30), ADDRESS VARCHAR(30), DONATION_DATE DATE DEFAULT NOW())'. The result indicates '0 row(s) affected'. At the bottom, execution statistics are listed: 'Execution Time : 0.014 sec', 'Transfer Time : 1.006 sec', and 'Total Time : 1.021 sec'.

```
1 Messages 2 Table Data 2 Info  
1 queries executed, 1 success, 0 errors, 0 warnings  
Query: CREATE TABLE DONATION_CENTER( DCID INT PRIMARY KEY, NAME VARCHAR(30), ADDRESS VARCHAR(30), DONATION_DATE DATE DEFAULT NOW() )  
0 row(s) affected  
Execution Time : 0.014 sec  
Transfer Time : 1.006 sec  
Total Time : 1.021 sec
```

2.1.10. Blood_Bank_Manager

```
CREATE TABLE BLOOD_BANK_MANAGER  
(  
    EMPLOYEE_ID INT PRIMARY KEY,  
    BBID INT,  
    FOREIGN KEY(BBID) REFERENCES BLOOD_BANK(BBID),  
    NAME VARCHAR(100),  
    CONTACT BIGINT  
);
```

Output



The screenshot displays the output of a SQL query execution in a database client. The interface includes tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, showing the following details:

- 1 queries executed, 1 success, 0 errors, 0 warnings
- Query: CREATE TABLE BLOOD_BANK_MANAGER (EMPLOYEE_ID INT PRIMARY KEY, BBID INT, FOREIGN KEY(BBID) REFERENCES BLOOD_BANK(BBID), NAME VAR...
- 0 row(s) affected
- Execution Time : 0.040 sec
- Transfer Time : 1.012 sec
- Total Time : 1.053 sec

At the bottom of the window, a status bar provides additional information: 'Exec: 0.040 sec', 'Total: 1.053 sec', 'Ln 67, Col 1', 'Connections: 1', and a registration notice 'Registered To: Rohan Gajurel'.

2.1.11. Person_Contact

```
CREATE TABLE PERSON_CONTACT(  
  
    PID INT,  
  
    FOREIGN KEY (PID) REFERENCES PERSON(PID),  
  
    CONTACT BIGINT  
  
);
```

Output

The screenshot displays a database query execution window. At the top, there are tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, showing the following text: '1 queries executed, 1 success, 0 errors, 0 warnings'. Below this, the query is displayed: 'Query: Create Table PERSON_CONTACT(PID INT, FOREIGN KEY (PID) REFERENCES PERSON(PID), CONTACT bigint)'. The result shows '0 row(s) affected'. Execution statistics are provided: 'Execution Time : 0.038 sec', 'Transfer Time : 1.008 sec', and 'Total Time : 1.046 sec'. At the bottom, there is a status bar with a dropdown menu set to 'All', and the following information: 'Exec: 0.038 sec', 'Total: 1.046 sec', 'Ln 97, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gaiurel'.

1 Messages 2 Table Data 3 Info

1 queries executed, 1 success, 0 errors, 0 warnings

Query: Create Table PERSON_CONTACT(PID INT, FOREIGN KEY (PID) REFERENCES PERSON(PID), CONTACT bigint)

0 row(s) affected

Execution Time : 0.038 sec
Transfer Time : 1.008 sec
Total Time : 1.046 sec

All

Exec: 0.038 sec Total: 1.046 sec Ln 97, Col 1 Connections: 1 [Registered To: Rohan Gaiurel](#)

2.1.12. Creating relationship table

DONATE

```
CREATE TABLE DONATE  
(  
    BID INT,  
    FOREIGN KEY(BID) REFERENCES BLOOD(BID),  
    DID INT,  
    FOREIGN KEY(DID) REFERENCES DONOR(DID)  
);
```

The screenshot shows a database client window with a blue header bar containing three tabs: "1 Messages", "2 Table Data", and "3 Info". The "Messages" tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings  
Query: CREATE TABLE DONATE ( BID INT, FOREIGN KEY(BID) REFERENCES BLOOD(BID), DID INT, FOREIGN KEY(DID) REFERENCES DONOR(DID) )  
0 row(s) affected  
Execution Time : 0.040 sec  
Transfer Time : 1.008 sec  
Total Time : 1.049 sec
```

Below the messages, there is a dropdown menu showing "All". At the bottom of the window, a status bar displays the following information:

- Exec: 0.040 sec
- Total: 1.049 sec
- Ln 74, Col 1
- Connections: 1
- [Registered To: Rohan Gaiurel](#)

VISIT

CREATE TABLE VISIT

(

BID INT,

FOREIGN KEY(BID) REFERENCES BLOOD(BID),

DCID INT,

FOREIGN KEY(DCID) REFERENCES DONATION_CENTER(DCID));

The screenshot shows a database client window with a blue header bar containing tabs for '1 Messages', '2 Table Data', and '3 Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings

Query: CREATE TABLE VISIT ( BID INT, FOREIGN KEY(BID) REFERENCES BLOOD(BID), DCID INT, FOREIGN KEY(DCID) REFERENCES
DONATION_CENTER(DCI...

0 row(s) affected

Execution Time : 0.044 sec
Transfer Time  : 1.010 sec
Total Time     : 1.055 sec
```

Below the message pane, there is a dropdown menu set to 'All'. At the bottom of the window, a status bar displays the following information: 'Exec: 0.044 sec', 'Total: 1.055 sec', 'Ln 90, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

COLLECTS

CREATE TABLE COLLECTS

(

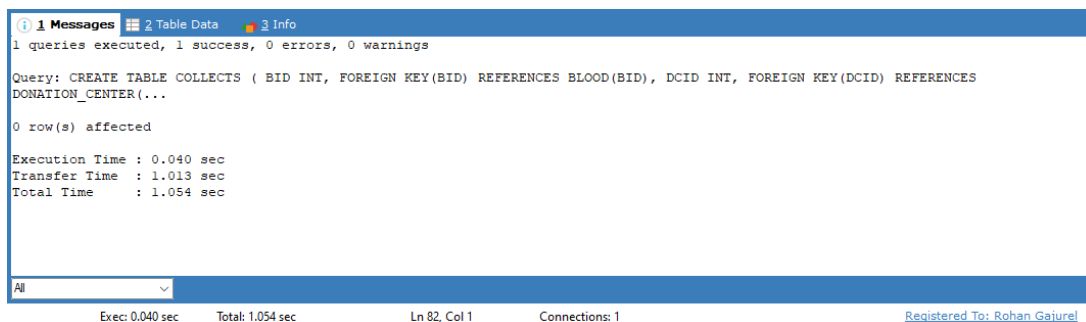
BID INT,

FOREIGN KEY(BID) REFERENCES BLOOD(BID),

DCID INT,

FOREIGN KEY(DCID) REFERENCES DONATION_CENTER(DCID)

);



The screenshot shows the execution results of the SQL command 'CREATE TABLE COLLECTS (BID INT, FOREIGN KEY(BID) REFERENCES BLOOD(BID), DCID INT, FOREIGN KEY(DCID) REFERENCES DONATION_CENTER(...)' in a database management tool. The interface includes tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, displaying the following information: '1 queries executed, 1 success, 0 errors, 0 warnings', the query text, '0 row(s) affected', and execution statistics: 'Execution Time : 0.040 sec', 'Transfer Time : 1.013 sec', and 'Total Time : 1.054 sec'. The bottom status bar shows 'Exec: 0.040 sec', 'Total: 1.054 sec', 'Ln 82, Col 1', 'Connections: 1', and a registration link 'Registered To: Rohan Gajurel'.

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: CREATE TABLE COLLECTS ( BID INT, FOREIGN KEY(BID) REFERENCES BLOOD(BID), DCID INT, FOREIGN KEY(DCID) REFERENCES
DONATION_CENTER(...)

0 row(s) affected

Execution Time : 0.040 sec
Transfer Time : 1.013 sec
Total Time : 1.054 sec
```

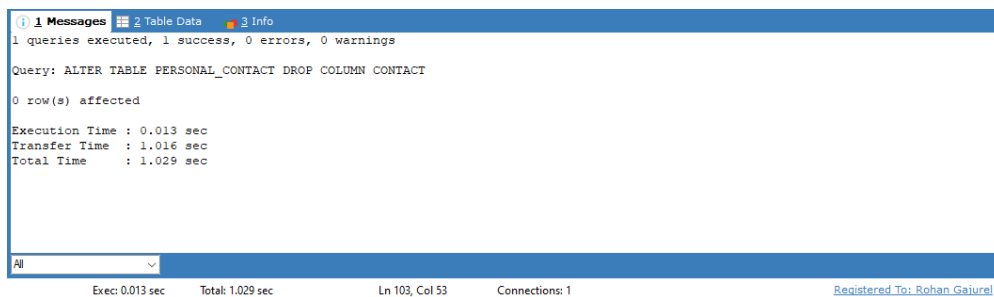
All

Exec: 0.040 sec Total: 1.054 sec Ln 82, Col 1 Connections: 1 [Registered To: Rohan Gajurel](#)

2.1.13. Drop Command

ALTER TABLE PERSONAL_CONTACT DROP COLUMN CONTACT

Output



The screenshot shows the execution results of the SQL command 'ALTER TABLE PERSONAL_CONTACT DROP COLUMN CONTACT' in a database management tool. The interface includes tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, displaying the following information: '1 queries executed, 1 success, 0 errors, 0 warnings', the query text, '0 row(s) affected', and execution statistics: 'Execution Time : 0.013 sec', 'Transfer Time : 1.016 sec', and 'Total Time : 1.029 sec'. The bottom status bar shows 'Exec: 0.013 sec', 'Total: 1.029 sec', 'Ln 103, Col 53', 'Connections: 1', and a registration link 'Registered To: Rohan Gajurel'.

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: ALTER TABLE PERSONAL_CONTACT DROP COLUMN CONTACT

0 row(s) affected

Execution Time : 0.013 sec
Transfer Time : 1.016 sec
Total Time : 1.029 sec
```

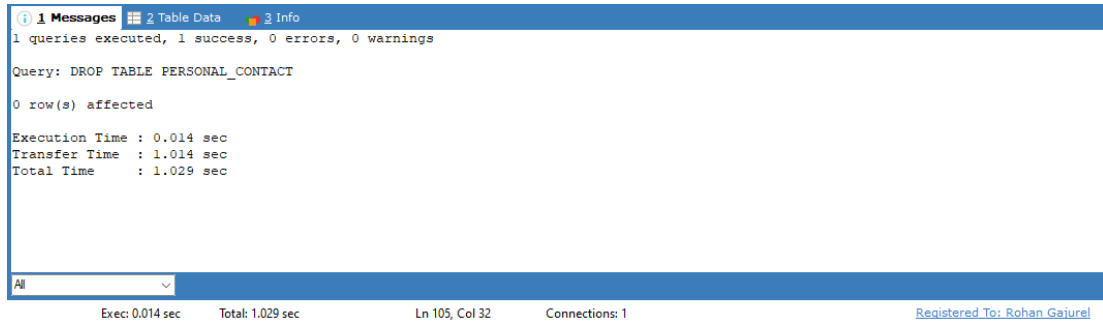
All

Exec: 0.013 sec Total: 1.029 sec Ln 103, Col 53 Connections: 1 [Registered To: Rohan Gajurel](#)

2.1.14. Drop: Deleting Table

DROP TABLE PERSONAL_CONTACT

Output



The screenshot shows a SQL client interface with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area displays the following text: '1 queries executed, 1 success, 0 errors, 0 warnings', 'Query: DROP TABLE PERSONAL_CONTACT', '0 row(s) affected', and execution statistics: 'Execution Time : 0.014 sec', 'Transfer Time : 1.014 sec', and 'Total Time : 1.029 sec'. At the bottom, a status bar shows 'Exec: 0.014 sec', 'Total: 1.029 sec', 'Ln 105, Col 32', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: DROP TABLE PERSONAL_CONTACT

0 row(s) affected

Execution Time : 0.014 sec
Transfer Time : 1.014 sec
Total Time : 1.029 sec

All
Exec: 0.014 sec Total: 1.029 sec Ln 105, Col 32 Connections: 1 Registered To: Rohan Gajurel
```

2.1.15. RENAME: Changing table name

ALTER TABLE PERSONAL_CONTACT RENAME TO
PERSON_CONTACT

Output



The screenshot shows a SQL client interface with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info' tabs. The main area displays the following text: '1 queries executed, 1 success, 0 errors, 0 warnings', 'Query: ALTER TABLE PERSONAL_CONTACT RENAME TO PERSON_CONTACT', '0 row(s) affected', and execution statistics: 'Execution Time : 0.010 sec', 'Transfer Time : 1.017 sec', and 'Total Time : 1.028 sec'. At the bottom, a status bar shows 'Exec: 0.010 sec', 'Total: 1.028 sec', 'Ln 108, Col 58', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: ALTER TABLE PERSONAL_CONTACT RENAME TO PERSON_CONTACT

0 row(s) affected

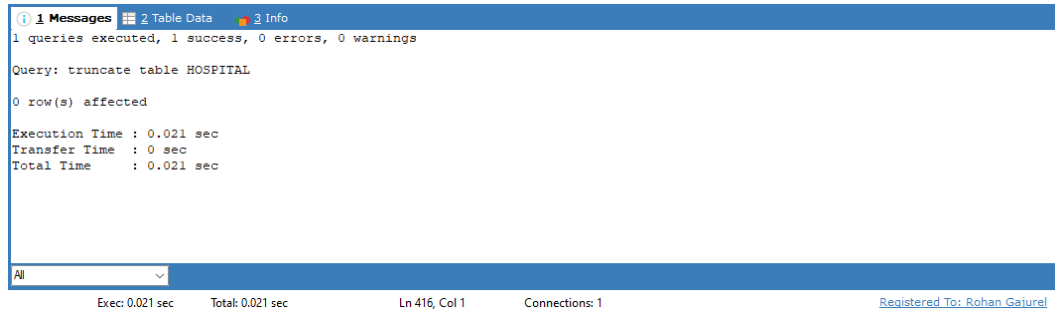
Execution Time : 0.010 sec
Transfer Time : 1.017 sec
Total Time : 1.028 sec

All
Exec: 0.010 sec Total: 1.028 sec Ln 108, Col 58 Connections: 1 Registered To: Rohan Gajurel
```

2.1.16. TRUNCATE

TRUNCATE table HOSPITAL

Output



The screenshot displays a database management interface with a blue header bar. The header contains three tabs: '1 Messages' (active), '2 Table Data', and '3 Info'. Below the header, a status bar indicates '1 queries executed, 1 success, 0 errors, 0 warnings'. The main content area shows the query 'Query: truncate table HOSPITAL' and the result '0 row(s) affected'. Below this, execution statistics are listed: 'Execution Time : 0.021 sec', 'Transfer Time : 0 sec', and 'Total Time : 0.021 sec'. At the bottom, a status bar shows 'Exec: 0.021 sec', 'Total: 0.021 sec', 'Ln 416, Col 1', 'Connections: 1', and a registration notice 'Registered To: Rohan Gaiurel'.

1 Messages 2 Table Data 3 Info

1 queries executed, 1 success, 0 errors, 0 warnings

Query: truncate table HOSPITAL

0 row(s) affected

Execution Time : 0.021 sec
Transfer Time : 0 sec
Total Time : 0.021 sec

All

Exec: 0.021 sec Total: 0.021 sec Ln 416, Col 1 Connections: 1 Registered To: Rohan Gaiurel

3. PHASE III

3.1. INSERTION OF DATA

3.1.1. INSERT INTO PERSON

```
INSERT INTO PERSON (PID, FIRST_NAME, MIDDLE_NAME,  
LAST_NAME, GENDER, ADDRESS, BLOOD_GROUP, DOB) VALUES  
  
(1, 'Ram', 'Bahadur', 'Sharma', 'M', 'Kathmandu',  
'A+', '1990-01-01'),  
  
(2, 'Sita', NULL, 'Adhikari', 'F', 'Lalitpur', 'B+',  
'1992-02-02'),  
  
(3, 'Hari', 'Prasad', 'Gurung', 'M', 'Pokhara', 'O+',  
'1985-03-03'),  
  
(4, 'Gita', NULL, 'Rana', 'F', 'Biratnagar', 'AB+',  
'1988-04-04'),  
  
(5, 'Mohan', 'Raj', 'Thapa', 'M', 'Bhaktapur', 'A-',  
'1980-05-05'),  
  
(6, 'Radha', NULL, 'Khadka', 'F', 'Butwal', 'B-',  
'1995-06-06'),  
  
(7, 'Bishnu', 'Kumar', 'Maharjan', 'M', 'Dharan', 'O-  
' , '1993-07-07'),  
  
(8, 'Laxmi', NULL, 'Tamang', 'F', 'Chitwan', 'AB-',  
'1991-08-08'),  
  
(9, 'Kamal', 'Krishna', 'Shrestha', 'M', 'Hetauda',  
'A+', '1989-09-09'),  
  
(10, 'Nirmala', NULL, 'Bista', 'F', 'Janakpur', 'B+',  
'1994-10-10'),  
  
(11, 'Dipak', 'Man', 'Lama', 'M', 'Kirtipur', 'O+',  
'1990-11-11'),
```

(12, 'Sarita', NULL, 'Shahi', 'F', 'Nepalgunj', 'AB+', '1992-12-12'),
(13, 'Prakash', 'Chandra', 'Karki', 'M', 'Birgunj', 'A-', '1987-01-13'),
(14, 'Rekha', NULL, 'Nepali', 'F', 'Dhankuta', 'B-', '1991-02-14'),
(15, 'Ramesh', 'Nath', 'Jha', 'M', 'Dhangadhi', 'O-', '1986-03-15'),
(16, 'Sunita', NULL, 'Shrestha', 'F', 'Gulmi', 'AB-', '1990-04-16'),
(17, 'Krishna', 'Bahadur', 'Khadka', 'M', 'Surkhet', 'A+', '1988-05-17'),
(18, 'Anita', NULL, 'Gurung', 'F', 'Palpa', 'B+', '1985-06-18'),
(19, 'Madan', 'Lal', 'Singh', 'M', 'Tanahun', 'O+', '1992-07-19'),
(20, 'Bina', NULL, 'Rai', 'F', 'Okhaldhunga', 'AB+', '1989-08-20'),
(21, 'Keshav', 'Prasad', 'Bhandari', 'M', 'Bharatpur', 'A-', '1993-09-21'),
(22, 'Menuka', NULL, 'Magar', 'F', 'Lamjung', 'B-', '1991-10-22'),
(23, 'Nirajan', 'Kumar', 'Tamang', 'M', 'Dhading', 'O-', '1987-11-23'),
(24, 'Sarmila', NULL, 'Sharma', 'F', 'Ilam', 'AB-', '1990-12-24'),
(25, 'Kiran', 'Lal', 'Thapa', 'M', 'Sunsari', 'A+', '1985-01-25'),

(26, 'Manju', NULL, 'Adhikari', 'F', 'Kavre', 'B+',
'1988-02-26'),

(27, 'Sanjay', 'Prasad', 'Gurung', 'M', 'Gorkha',
'O+', '1991-03-27'),

(28, 'Anju', NULL, 'Rana', 'F', 'Sindhupalchowk',
'AB+', '1986-04-28'),

(29, 'Dinesh', 'Raj', 'Shrestha', 'M', 'Dolakha', 'A-
' , '1990-05-29'),

(30, 'Sushma', NULL, 'Karki', 'F', 'Nuwakot', 'B-',
'1987-06-30'),

(31, 'Rajesh', 'Kumar', 'Thapa', 'M', 'Baglung', 'O-',
'1992-07-31'),

(32, 'Kabita', NULL, 'Khadka', 'F', 'Rukum', 'AB-',
'1994-08-01'),

(33, 'Pawan', 'Krishna', 'Maharjan', 'M',
'Sankhuwasabha', 'A+', '1989-09-02'),

(34, 'Reena', NULL, 'Gurung', 'F', 'Sindhuli', 'B+',
'1991-10-03'),

(35, 'Bimal', 'Chandra', 'Rai', 'M', 'Bara', 'O+',
'1985-11-04'),

(36, 'Jyoti', NULL, 'Tamang', 'F', 'Parsa', 'AB+',
'1988-12-05'),

(37, 'Nabin', 'Man', 'Khadka', 'M', 'Saptari', 'A-',
'1990-01-06'),

(38, 'Rajani', NULL, 'Shrestha', 'F', 'Sarlahi', 'B-',
'1992-02-07'),

(39, 'Ajay', 'Prasad', 'Singh', 'M', 'Kanchanpur', 'O-
' , '1986-03-08'),

```

(40, 'Nisha', NULL, 'Rana', 'F', 'Bardiya', 'AB-',
'1991-04-09'),

(41, 'Bijay', 'Kumar', 'Thapa', 'M', 'Jumla', 'A+',
'1988-05-10'),

(42, 'Sabina', NULL, 'Adhikari', 'F', 'Kailali', 'B+',
'1987-06-11'),

(43, 'Arjun', 'Bahadur', 'Gurung', 'M', 'Dailekh',
'o+', '1990-07-12'),

(44, 'Menuka', NULL, 'Rai', 'F', 'Dolpa', 'AB+',
'1985-08-13'),

(45, 'Sagar', 'Chandra', 'Shrestha', 'M', 'Achham',
'A-', '1989-09-14'),

(46, 'Manisha', NULL, 'Gurung', 'F', 'Jajarkot', 'B-',
'1991-10-15'),

(47, 'Ashok', 'Raj', 'Karki', 'M', 'Ramechhap', 'O-',
'1986-11-16'),

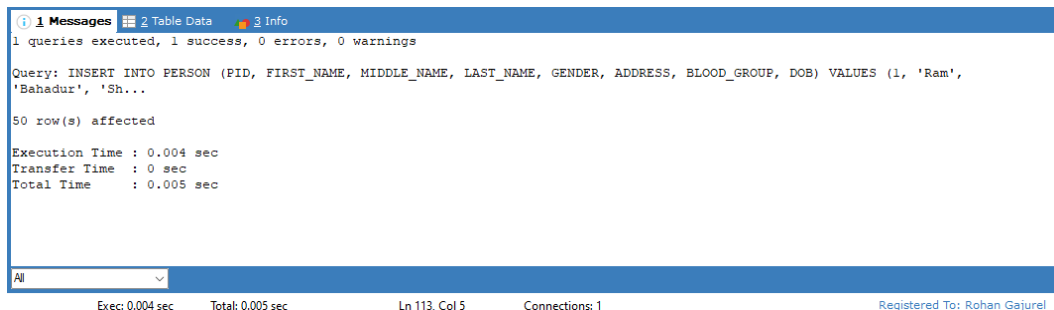
(48, 'Anita', NULL, 'Tamang', 'F', 'Arghakhanchi',
'AB-', '1990-12-17'),

(49, 'Raju', 'Krishna', 'Nepali', 'M', 'Kapilvastu',
'A+', '1987-01-18'),

(50, 'Lila', NULL, 'Shrestha', 'F', 'Parbat', 'B+',
'1988-02-19');

```

3.1.2. Output



The screenshot shows a database client window with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info'. The main area displays the following text:

```

1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO PERSON (PID, FIRST_NAME, MIDDLE_NAME, LAST_NAME, GENDER, ADDRESS, BLOOD_GROUP, DOB) VALUES (1, 'Ram',
'Bahadur', 'Sh...

50 row(s) affected

Execution Time : 0.004 sec
Transfer Time : 0 sec
Total Time : 0.005 sec

```

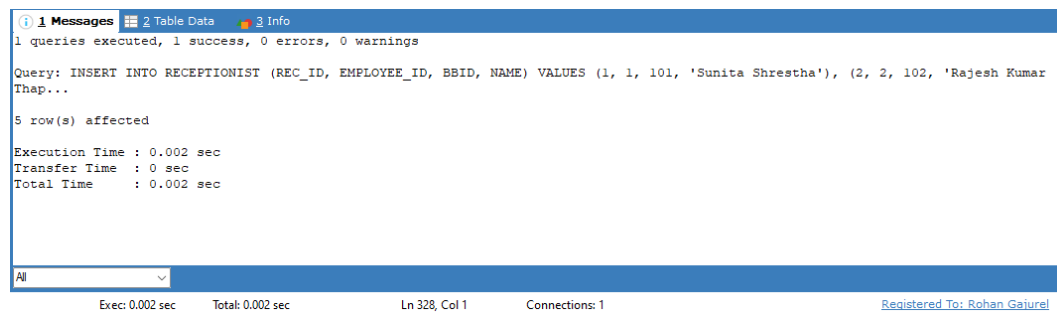
At the bottom, there is a status bar with the following information: 'Exec: 0.004 sec', 'Total: 0.005 sec', 'Ln 113, Col 5', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

3.1.3. INSERT DATA INTO RECEPTIONIST

```
INSERT INTO RECEPTIONIST (REC_ID, EMPLOYEE_ID, BBID,  
NAME) VALUES
```

```
(1, 1, 101, 'Sunita Shrestha'),  
(2, 2, 102, 'Rajesh Kumar Thapa'),  
(3, 3, 103, 'Bimala Gurung'),  
(4, 1, 102, 'Dipak Sharma'),  
(5, 5, 101, 'Anjali Rai');
```

Output



The screenshot displays a database client window with three tabs: '1 Messages', '2 Table Data', and '3 Info'. The 'Messages' tab is active, showing the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings  
  
Query: INSERT INTO RECEPTIONIST (REC_ID, EMPLOYEE_ID, BBID, NAME) VALUES (1, 1, 101, 'Sunita Shrestha'), (2, 2, 102, 'Rajesh Kumar Thap...  
  
5 row(s) affected  
  
Execution Time : 0.002 sec  
Transfer Time : 0 sec  
Total Time : 0.002 sec
```

At the bottom of the window, there is a status bar with the following information:

- Exec: 0.002 sec
- Total: 0.002 sec
- Ln 328, Col 1
- Connections: 1
- [Registered To: Rohan Gaiurel](#)

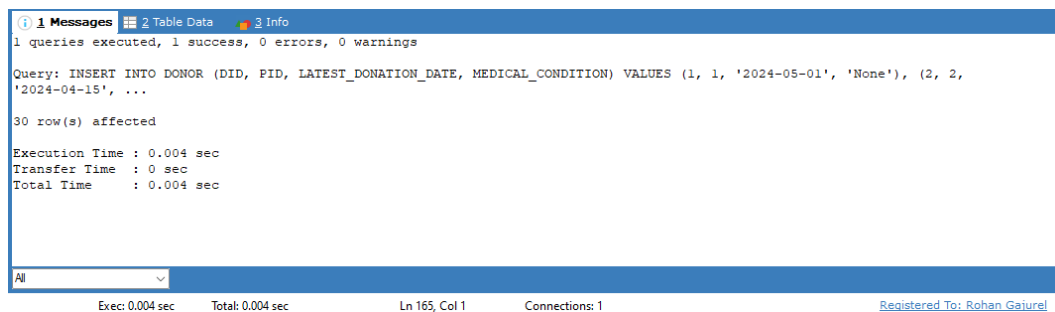
3.1.4. INSERT DATA INTO DONOR

INSERT INTO DONOR (DID, PID, LATEST_DONATION_DATE,
MEDICAL_CONDITION) VALUES

(1, 1, '2024-05-01', 'None'),
(2, 2, '2024-04-15', 'None'),
(3, 3, '2024-03-30', 'None'),
(4, 4, '2024-02-28', 'None'),
(5, 5, '2024-01-25', 'None'),
(6, 6, '2024-05-05', 'Diabetic'),
(7, 7, '2024-04-10', 'None'),
(8, 8, '2024-03-20', 'Hypertension'),
(9, 9, '2024-02-10', 'None'),
(10, 10, '2024-01-15', 'None'),
(11, 11, '2024-05-01', 'None'),
(12, 12, '2024-04-05', 'None'),
(13, 13, '2024-03-15', 'Asthma'),
(14, 14, '2024-02-25', 'None'),
(15, 15, '2024-01-10', 'None'),
(16, 16, '2024-05-02', 'None'),
(17, 17, '2024-04-12', 'None'),
(18, 18, '2024-03-22', 'None'),
(19, 19, '2024-02-05', 'None'),
(20, 20, '2024-01-20', 'None'),
(21, 21, '2024-05-05', 'None'),

```
(22, 22, '2024-04-15', 'None'),
(23, 23, '2024-03-05', 'None'),
(24, 24, '2024-02-10', 'None'),
(25, 25, '2024-01-30', 'None'),
(26, 26, '2024-05-08', 'None'),
(27, 27, '2024-04-18', 'None'),
(28, 28, '2024-03-28', 'None'),
(29, 29, '2024-02-15', 'None'),
(30, 30, '2024-01-05', 'None');
```

Output



The screenshot shows a database query execution window with a blue header bar containing tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO DONOR (DID, PID, LATEST_DONATION_DATE, MEDICAL_CONDITION) VALUES (1, 1, '2024-05-01', 'None'), (2, 2,
'2024-04-15', ...

30 row(s) affected

Execution Time : 0.004 sec
Transfer Time : 0 sec
Total Time : 0.004 sec
```

At the bottom of the window, there is a status bar with a dropdown menu set to 'All'. To the right of the dropdown, the following information is displayed: 'Exec: 0.004 sec', 'Total: 0.004 sec', 'Ln 165, Col 1', 'Connections: 1', and a link that says 'Registered To: Rohan Gajurel'.

3.1.5. INSERT DATA INTO RECEIVER

```
INSERT INTO RECEIVER (RID, PID, BBID, RECEIVED_DATE,  
QTY_REQUIRED) VALUES
```

```
(1, 31, 101, '2024-05-01', '1 Unit'),  
(2, 32, 102, '2024-04-15', '2 Units'),  
(3, 33, 103, '2024-03-30', '1 Unit'),  
(4, 34, 101, '2024-02-28', '1 Unit'),  
(5, 35, 102, '2024-01-25', '2 Units'),  
(6, 36, 103, '2024-05-05', '1 Unit'),  
(7, 37, 101, '2024-04-10', '1 Unit'),  
(8, 38, 103, '2024-03-20', '2 Units'),  
(9, 39, 103, '2024-02-10', '1 Unit'),  
(10, 40, 102, '2024-01-15', '2 Units'),  
(11, 41, 102, '2024-05-01', '1 Unit'),  
(12, 42, 101, '2024-04-05', '2 Units'),  
(13, 43, 103, '2024-03-15', '1 Unit'),  
(14, 44, 101, '2024-02-25', '1 Unit'),  
(15, 45, 102, '2024-01-10', '2 Units'),  
(16, 46, 103, '2024-05-02', '1 Unit'),  
(17, 47, 101, '2024-04-12', '2 Units'),  
(18, 48, 102, '2024-03-22', '1 Unit'),  
(19, 49, 101, '2024-02-05', '1 Unit'),  
(20, 50, 103, '2024-01-20', '2 Units');
```

Output

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO RECEIVER (RID, PID, BBID, RECEIVED_DATE, QTY_REQUIRED) VALUES (1, 31, 101, '2024-05-01', '1 Unit'), (2, 32, 102, '20...

20 row(s) affected

Execution Time : 0.003 sec
Transfer Time : 0 sec
Total Time : 0.004 sec
```

3.1.6. INSERT DATA INTO DONATION_CENTER

INSERT INTO DONATION_CENTER (DCID, NAME, ADDRESS, DONATION_DATE) VALUES

```
(1, 'Kathmandu Blood Center', 'Kathmandu', '2024-05-01'),
(2, 'Lalitpur Blood Center', 'Lalitpur', '2024-04-15'),
(3, 'Pokhara Blood Center', 'Pokhara', '2024-03-30'),
(4, 'Biratnagar Blood Center', 'Biratnagar', '2024-02-28'),
(5, 'Chitwan Blood Center', 'Chitwan', '2024-01-25');
```

Output

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO DONATION_CENTER (DCID, NAME, ADDRESS, DONATION_DATE) VALUES (1, 'Kathmandu Blood Center', 'Kathmandu', '2024-05-01')...

5 row(s) affected

Execution Time : 0.002 sec
Transfer Time : 0 sec
Total Time : 0.003 sec
```

All

Exec: 0.002 sec Total: 0.003 sec Ln 228, Col 58 Connections: 1 [Registered To: Rohan Gajurel](#)

3.1.7. INSERT DATA INTO BLOOD

INSERT INTO BLOOD (BID, BLOOD_GROUP, COLLECTION_DATE, EXPIRE_DATE) VALUES

(1, 'A+', '2024-05-01', '2024-08-01'),
(2, 'A-', '2024-04-15', '2024-07-15'),
(3, 'B+', '2024-03-30', '2024-06-30'),
(4, 'B-', '2024-02-28', '2024-05-28'),
(5, 'O+', '2024-01-25', '2024-04-25'),
(6, 'O-', '2024-05-05', '2024-08-05'),
(7, 'AB+', '2024-04-10', '2024-07-10'),
(8, 'AB-', '2024-03-20', '2024-06-20'),
(9, 'A+', '2024-02-10', '2024-05-10'),
(10, 'A-', '2024-01-15', '2024-04-15'),
(11, 'B+', '2024-05-01', '2024-08-01'),
(12, 'B-', '2024-04-05', '2024-07-05'),
(13, 'O+', '2024-03-15', '2024-06-15'),
(14, 'O-', '2024-02-25', '2024-05-25'),
(15, 'AB+', '2024-01-10', '2024-04-10'),
(16, 'AB-', '2024-05-02', '2024-08-02'),
(17, 'A+', '2024-04-12', '2024-07-12'),
(18, 'A-', '2024-03-22', '2024-06-22'),
(19, 'B+', '2024-02-05', '2024-05-05'),
(20, 'B-', '2024-01-20', '2024-04-20');

Output

1 Messages

2 Table Data

3 Info

1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO BLOOD (BID, BLOOD_GROUP, COLLECTION_DATE, EXPIRE_DATE) VALUES (1, 'A+', '2024-05-01', '2024-08-01'), (2, 'A-', '2024-05-01', '2024-08-01')

20 row(s) affected

Execution Time : 0.002 sec
Transfer Time : 0 sec
Total Time : 0.002 sec

All

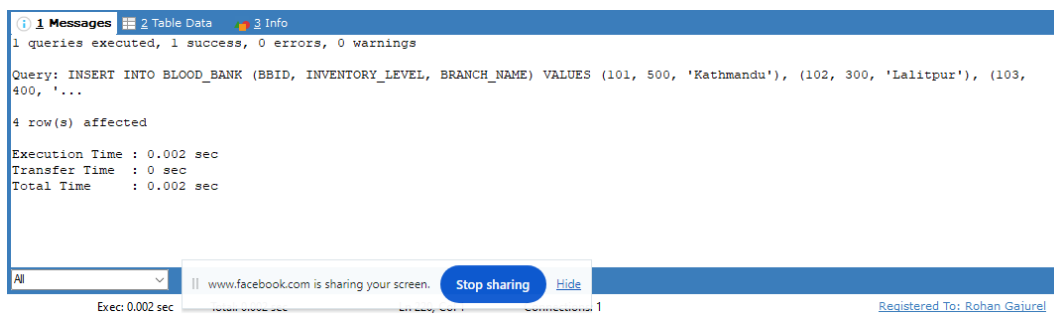
Exec: 0.002 sec Total: 0.002 sec Ln 245, Col 1 Connections: 1 [Registered To: Rohan Gaijurel](#)

3.1.8. INSERT DATA INTO BLOOD_BANK

INSERT INTO BLOOD_BANK (BBID, INVENTORY_LEVEL,
BRANCH_NAME) VALUES

(101, 500, 'Kathmandu'),
(102, 300, 'Lalitpur'),
(103, 400, 'Pokhara'),
(104, 350, 'Biratnagar');

Output



The screenshot displays a database management interface with a blue header bar containing tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, showing a status bar that reads '1 queries executed, 1 success, 0 errors, 0 warnings'. Below this, the executed query is shown: 'Query: INSERT INTO BLOOD_BANK (BBID, INVENTORY_LEVEL, BRANCH_NAME) VALUES (101, 500, 'Kathmandu'), (102, 300, 'Lalitpur'), (103, 400, '...'. The result indicates '4 row(s) affected'. Performance metrics are listed: 'Execution Time : 0.002 sec', 'Transfer Time : 0 sec', and 'Total Time : 0.002 sec'. At the bottom, there is a sharing notification from Facebook and a status bar showing 'Exec: 0.002 sec' and 'Registered To: Rohan Gaiurel'.

1 Messages 2 Table Data 3 Info

1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO BLOOD_BANK (BBID, INVENTORY_LEVEL, BRANCH_NAME) VALUES (101, 500, 'Kathmandu'), (102, 300, 'Lalitpur'), (103, 400, '...'

4 row(s) affected

Execution Time : 0.002 sec
Transfer Time : 0 sec
Total Time : 0.002 sec

All || www.facebook.com is sharing your screen. Stop sharing Hide

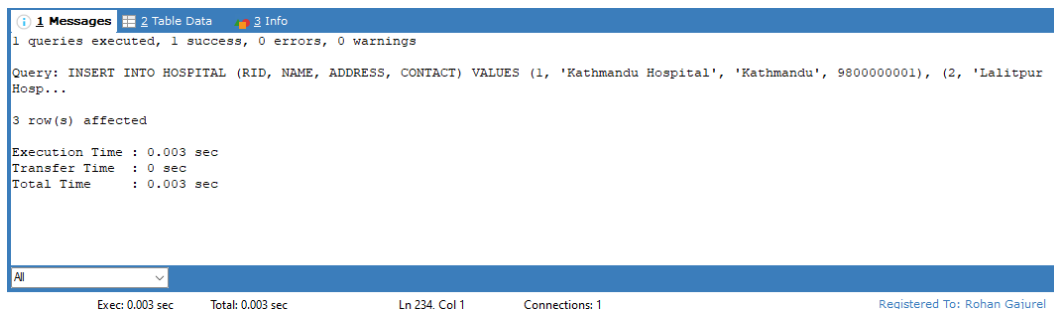
Exec: 0.002 sec Registered To: Rohan Gaiurel

3.1.9. INSERT DATA INTO HOSPITAL

INSERT INTO HOSPITAL (RID, NAME, ADDRESS, CONTACT)
VALUES

(1, 'Kathmandu Hospital', 'Kathmandu', 9800000001),
(2, 'Lalitpur Hospital', 'Lalitpur', 9800000002),
(3, 'Pokhara Hospital', 'Pokhara', 9800000003);

Output



3.1.10. INSERT DATA INTO BLOOD_BANK_MANAGER

INSERT INTO BLOOD_BANK_MANAGER (EMPLOYEE_ID, BBID, NAME, CONTACT) VALUES

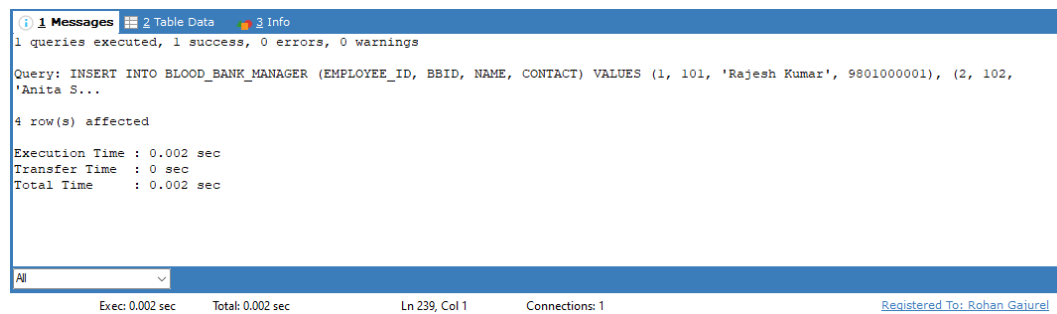
(1, 101, 'Rajesh Kumar', 9801000001),

(2, 102, 'Anita Sharma', 9801000002),

(3, 103, 'Bikash Thapa', 9801000003),

(4, 104, 'Sita Rana', 9801000004);

Output



The screenshot shows a database query execution window with a blue header bar containing tabs for 'Messages', 'Table Data', and 'Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO BLOOD_BANK_MANAGER (EMPLOYEE_ID, BBID, NAME, CONTACT) VALUES (1, 101, 'Rajesh Kumar', 9801000001), (2, 102, 'Anita S...

4 row(s) affected

Execution Time : 0.002 sec
Transfer Time : 0 sec
Total Time : 0.002 sec
```

At the bottom of the window, there is a status bar with the following information: 'Exec: 0.002 sec', 'Total: 0.002 sec', 'Ln 239, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gajurel'.

3.1.11. INSERT DATA INTO DONATE

INSERT INTO DONATE (BID, DID) VALUES

(15, 12),

(8, 25),

(11, 7),

(4, 19),

(17, 14),

(6, 28),

(9, 30),

(20, 22),

(13, 5),

(3, 16);

Output

```
1 Messages 2 Table Data 3 Info
1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO DONATE (BID, DID) VALUES (15, 12), (8, 25), (11, 7), (4, 19), (17, 14), (6, 28), (9, 30), (20, 22), (13, 5),
(3, 16)

10 row(s) affected

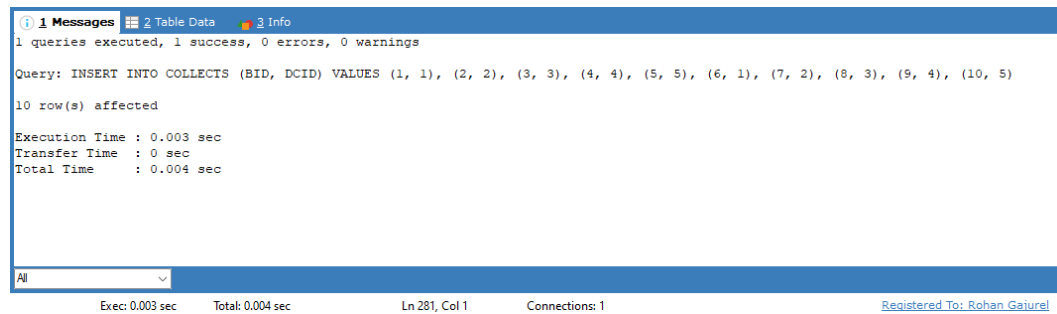
Execution Time : 0.003 sec
Transfer Time : 0 sec
Total Time : 0.003 sec
```

3.1.12. INSERT DATA INTO COLLECTS

INSERT INTO COLLECTS (BID, DCID) VALUES

(1, 1),
(2, 2),
(3, 3),
(4, 4),
(5, 5),
(6, 1),
(7, 2),
(8, 3),
(9, 4),
(10, 5);

Output



The screenshot shows a database interface with a blue header bar containing tabs for '1 Messages', '2 Table Data', and '3 Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings  
  
Query: INSERT INTO COLLECTS (BID, DCID) VALUES (1, 1), (2, 2), (3, 3), (4, 4), (5, 5), (6, 1), (7, 2), (8, 3), (9, 4), (10, 5)  
  
10 row(s) affected  
  
Execution Time : 0.003 sec  
Transfer Time : 0 sec  
Total Time : 0.004 sec
```

At the bottom of the window, there is a status bar with the following information:

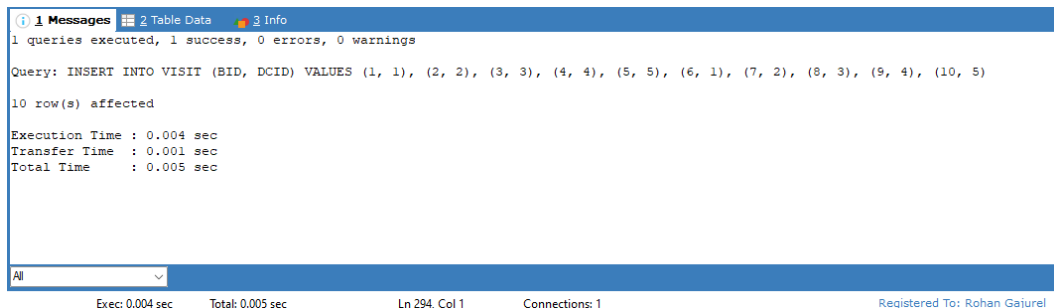
- Exec: 0.003 sec
- Total: 0.004 sec
- Ln 281, Col 1
- Connections: 1
- Registered To: Rohan Gaiurel

3.1.13. INSERT DATA INTO VISIT

INSERT INTO VISIT (BID, DCID) VALUES

(1, 1),
(2, 2),
(3, 3),
(4, 4),
(5, 5),
(6, 1),
(7, 2),
(8, 3),
(9, 4),
(10, 5);

Output



The screenshot shows a database interface with a blue header bar containing three tabs: '1 Messages', '2 Table Data', and '3 Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings  
  
Query: INSERT INTO VISIT (BID, DCID) VALUES (1, 1), (2, 2), (3, 3), (4, 4), (5, 5), (6, 1), (7, 2), (8, 3), (9, 4), (10, 5)  
  
10 row(s) affected  
  
Execution Time : 0.004 sec  
Transfer Time  : 0.001 sec  
Total Time     : 0.005 sec
```

Below the message pane, there is a status bar with a dropdown menu set to 'All'. To the right of the dropdown, the following information is displayed: 'Exec: 0.004 sec', 'Total: 0.005 sec', 'Ln 294, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gaiurel'.

3.1.14. INSERT INTO PERSON_CONTACT

INSERT INTO PERSON_CONTACT (PID, CONTACT) VALUES

(1, 9801000001),
(2, 9802000002),
(3, 9803000003),
(4, 9804000004),
(5, 9805000005),
(6, 9806000006),
(7, 9807000007),
(8, 9808000008),
(9, 9809000009),
(10, 9810000010),
(1, 9801000011),
(2, 9802000012),
(3, 9803000023),
(4, 9804000044),
(5, 9805000015),
(6, 9806000016),
(6, 9807000017),
(7, 9808000018),
(7, 9809000019),
(8, 9810000011);

Output

1 Messages

2 Table Data

3 Info

1 queries executed, 1 success, 0 errors, 0 warnings

Query: INSERT INTO PERSON_CONTACT (PID, CONTACT) VALUES (1, 9801000001), (2, 9802000002), (3, 9803000003), (4, 9804000004), (5, 9805000005)...

20 row(s) affected

Execution Time : 0.007 sec
Transfer Time : 0.002 sec
Total Time : 0.010 sec

All

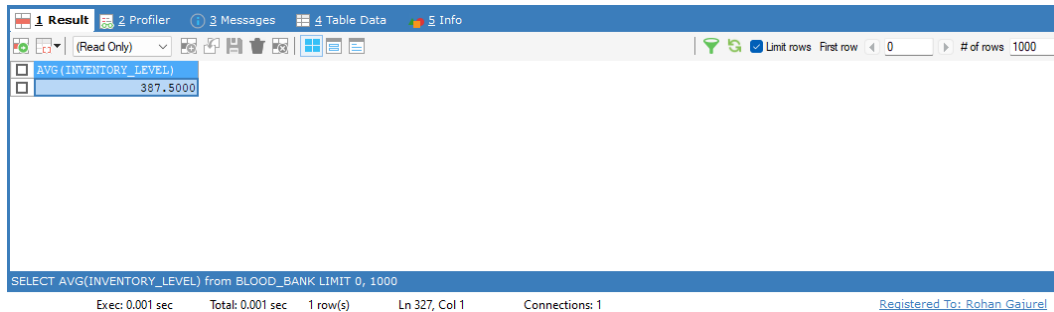
Exec: 0.007 sec Total: 0.010 sec Ln 306, Col 1 Connections: 1 [Registered To: Rohan Gajurel](#)

3.2. Aggregate Function

3.2.1. AVG():

```
SELECT AVG(INVENTORY_LEVEL) FROM BLOOD_BANK
```

Output



The screenshot shows the SQL Server Enterprise Manager interface. The 'Result' tab is active, displaying a single row with the value 387.5000 for the column 'AVG(INVENTORY_LEVEL)'. The status bar at the bottom indicates the query was executed in 0.001 seconds, returning 1 row(s).

AVG(INVENTORY_LEVEL)
387.5000

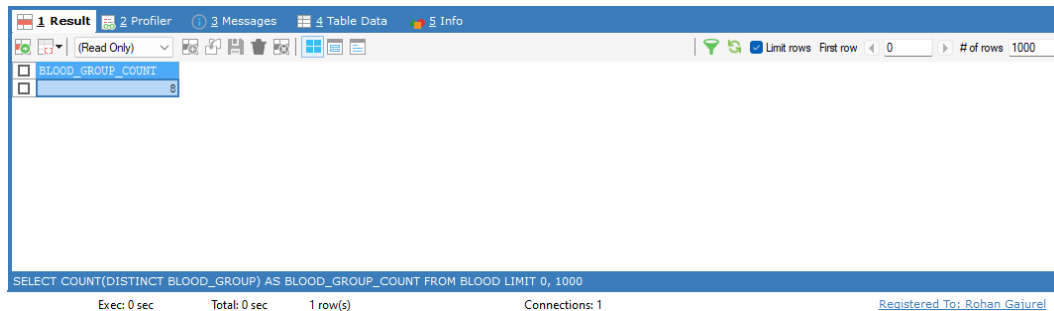
SELECT AVG(INVENTORY_LEVEL) from BLOOD_BANK LIMIT 0, 1000

Exec: 0.001 sec Total: 0.001 sec 1 row(s) Ln 327, Col 1 Connections: 1 [Registered To: Rohan Gaijural](#)

3.2.2. COUNT():

```
SELECT COUNT(DISTINCT BLOOD_GROUP) AS  
BLOOD_GROUP_COUNT FROM BLOOD;
```

Output



The screenshot shows the SQL Server Enterprise Manager interface. The 'Result' tab is active, displaying a single row with the value 8 for the column 'BLOOD_GROUP_COUNT'. The status bar at the bottom indicates the query was executed in 0 seconds, returning 1 row(s).

BLOOD_GROUP_COUNT
8

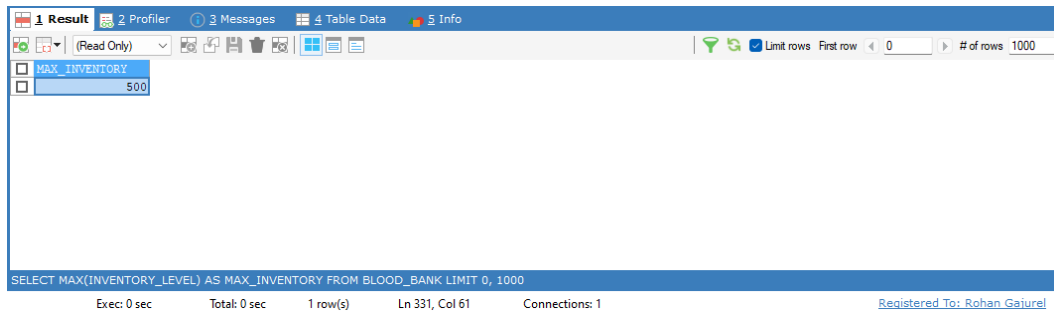
SELECT COUNT(DISTINCT BLOOD_GROUP) AS BLOOD_GROUP_COUNT FROM BLOOD LIMIT 0, 1000

Exec: 0 sec Total: 0 sec 1 row(s) Connections: 1 [Registered To: Rohan Gaijural](#)

3.2.3. MAX():

```
SELECT MAX(INVENTORY_LEVEL) AS MAX_INVENTORY FROM  
BLOOD_BANK
```

Output



The screenshot shows a SQL query result in a software interface. The query is 'SELECT MAX(INVENTORY_LEVEL) AS MAX_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000'. The result is a single row with the column 'MAX_INVENTORY' and the value '500'. The interface includes a toolbar with icons for result, profiler, messages, table data, and info. It also shows execution statistics: 'Exec: 0 sec', 'Total: 0 sec', '1 row(s)', 'Ln 331, Col 61', and 'Connections: 1'. A registration notice 'Registered To: Rohan Gajurel' is visible at the bottom right.

MAX_INVENTORY
500

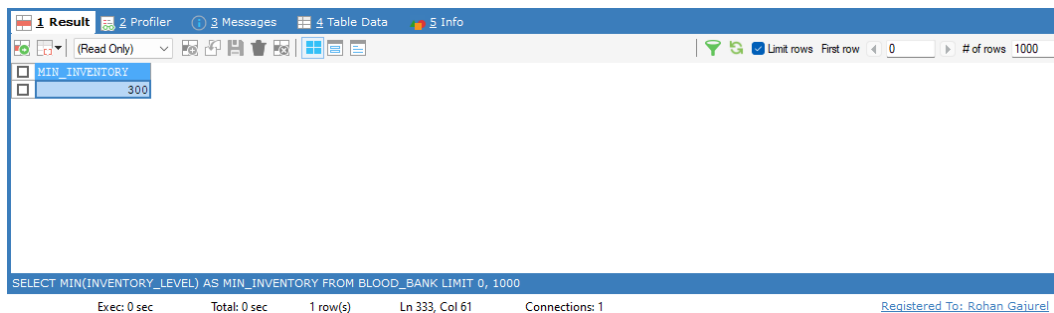
SELECT MAX(INVENTORY_LEVEL) AS MAX_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000

Exec: 0 sec Total: 0 sec 1 row(s) Ln 331, Col 61 Connections: 1 [Registered To: Rohan Gajurel](#)

3.2.4. MIN():

```
SELECT MIN(INVENTORY_LEVEL) AS MIN_INVENTORY FROM  
BLOOD_BANK
```

Output



The screenshot shows a SQL query result in a software interface. The query is 'SELECT MIN(INVENTORY_LEVEL) AS MIN_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000'. The result is a single row with the column 'MIN_INVENTORY' and the value '300'. The interface includes a toolbar with icons for result, profiler, messages, table data, and info. It also shows execution statistics: 'Exec: 0 sec', 'Total: 0 sec', '1 row(s)', 'Ln 333, Col 61', and 'Connections: 1'. A registration notice 'Registered To: Rohan Gajurel' is visible at the bottom right.

MIN_INVENTORY
300

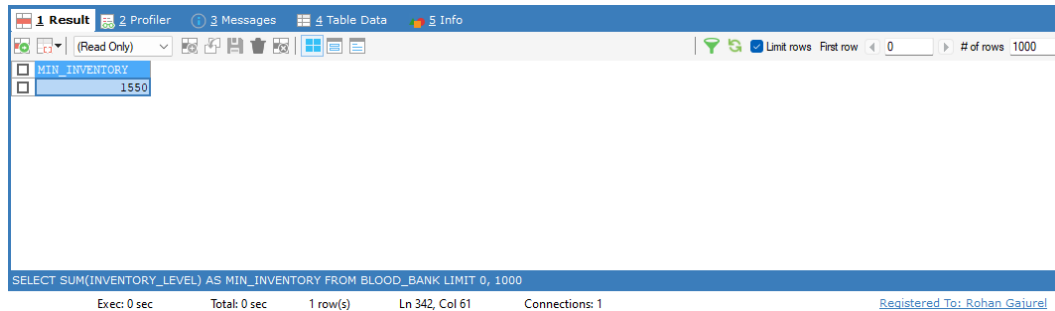
SELECT MIN(INVENTORY_LEVEL) AS MIN_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000

Exec: 0 sec Total: 0 sec 1 row(s) Ln 333, Col 61 Connections: 1 [Registered To: Rohan Gajurel](#)

3.2.5. SUM():

```
SELECT SUM(INVENTORY_LEVEL) AS MIN_INVENTORY FROM  
BLOOD_BANK
```

Output



The screenshot shows a database query result window with a blue header bar containing tabs for '1 Result', '2 Profiler', '3 Messages', '4 Table Data', and '5 Info'. Below the header, there is a toolbar with icons for various actions and a status bar. The main area displays a single row of results with the column name 'MIN_INVENTORY' and the value '1550'. The status bar at the bottom shows the executed SQL query: 'SELECT SUM(INVENTORY_LEVEL) AS MIN_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000'. Below the query, it displays execution statistics: 'Exec: 0 sec', 'Total: 0 sec', '1 row(s)', 'Ln 342, Col 61', and 'Connections: 1'. A link 'Registered To: Rohan Gaijurel' is also visible on the right side of the status bar.

MIN_INVENTORY
1550

SELECT SUM(INVENTORY_LEVEL) AS MIN_INVENTORY FROM BLOOD_BANK LIMIT 0, 1000

Exec: 0 sec Total: 0 sec 1 row(s) Ln 342, Col 61 Connections: 1 [Registered To: Rohan Gaijurel](#)

3.3. JOIN

3.3.1. INNER JOIN

```
SELECT p.FIRST_NAME,p.LAST_NAME, b.BLOOD_GROUP
FROM DONOR d
INNER JOIN PERSON p ON d.PID = p.PID
INNER JOIN BLOOD b ON d.DID = b.BID;
```

Output



<input type="checkbox"/>	FIRST_NAME	LAST_NAME	BLOOD_GROUP
<input type="checkbox"/>	Ram	Sharma	A+
<input type="checkbox"/>	Sita	Adhikari	A-
<input type="checkbox"/>	Hari	Gurung	B+
<input type="checkbox"/>	Gita	Rana	B-
<input type="checkbox"/>	Mohan	Thapa	O+
<input type="checkbox"/>	Radha	Khadka	O-
<input type="checkbox"/>	Bishnu	Maharjan	AB+
<input type="checkbox"/>	Laxmi	Tamang	AB-
<input type="checkbox"/>	Kamal	Shrestha	A+
<input type="checkbox"/>	Nirmala	Bista	A-
<input type="checkbox"/>	Dipak	Lama	B+

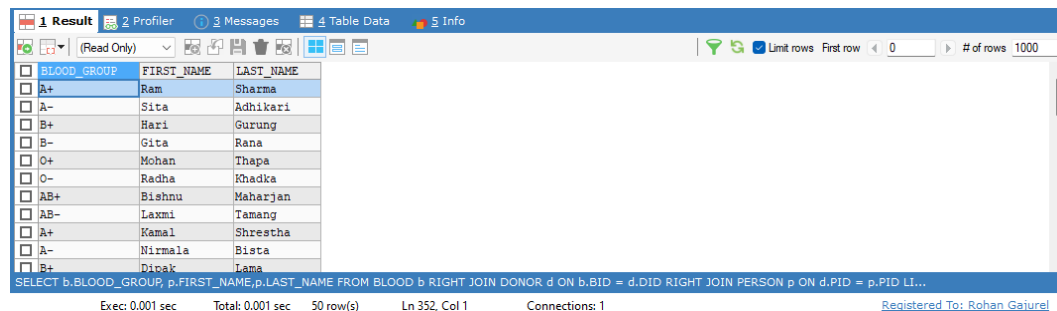
SELECT p.FIRST_NAME,p.LAST_NAME, b.BLOOD_GROUP FROM DONOR d INNER JOIN PERSON p ON d.PID = p.PID INNER JOIN BLOOD b ON d.DID = b.BID LI...

Exec: 0 sec Total: 0 sec 20 row(s) Ln 348, Col 37 Connections: 1 [Registered To: Rohan Gaiurel](#)

3.3.2. RIGHT JOIN

```
SELECT b.BLOOD_GROUP, p.FIRST_NAME,p.LAST_NAME
FROM BLOOD b
RIGHT JOIN DONOR d ON b.BID = d.DID
RIGHT JOIN PERSON p ON d.PID = p.PID;
```

Output



<input type="checkbox"/>	BLOOD_GROUP	FIRST_NAME	LAST_NAME
<input type="checkbox"/>	A+	Ram	Sharma
<input type="checkbox"/>	A-	Sita	Adhikari
<input type="checkbox"/>	B+	Hari	Gurung
<input type="checkbox"/>	B-	Gita	Rana
<input type="checkbox"/>	O+	Mohan	Thapa
<input type="checkbox"/>	O-	Radha	Khadka
<input type="checkbox"/>	AB+	Bishnu	Maharjan
<input type="checkbox"/>	AB-	Laxmi	Tamang
<input type="checkbox"/>	A+	Kamal	Shrestha
<input type="checkbox"/>	A-	Nirmala	Bista
<input type="checkbox"/>	B+	Dipak	Lama

SELECT b.BLOOD_GROUP, p.FIRST_NAME,p.LAST_NAME FROM BLOOD b RIGHT JOIN DONOR d ON b.BID = d.DID RIGHT JOIN PERSON p ON d.PID = p.PID LI...

Exec: 0.001 sec Total: 0.001 sec 50 row(s) Ln 352, Col 1 Connections: 1 [Registered To: Rohan Gaiurel](#)

3.3.3. CROSS JOIN

```
SELECT p.FIRST_NAME, p.LAST_NAME, b.BLOOD_GROUP  
  
FROM PERSON p  
  
CROSS JOIN BLOOD b;
```

Output

FIRST_NAME	LAST_NAME	BLOOD_GROUP
Ram	Sharma	A+
Ram	Sharma	A-
Ram	Sharma	B+
Ram	Sharma	B-
Ram	Sharma	O+
Ram	Sharma	O-
Ram	Sharma	AB+
Ram	Sharma	AB-
Ram	Sharma	A+
Ram	Sharma	A-
Ram	Sharma	B+

SELECT p.FIRST_NAME, p.LAST_NAME, b.BLOOD_GROUP FROM PERSON p CROSS JOIN BLOOD b LIMIT 0, 1000

Exec: 0 sec Total: 0.001 sec 1000 row(s) Ln 363, Col 1 Connections: 1 Registered To: Rohan Gaiurel

3.4. VIEW IN DATABASE

3.4.1. Creating View

```
CREATE VIEW DONOR_COUNT AS  
  
SELECT b.BLOOD_GROUP, COUNT(d.DID) AS DONOR_COUNT,  
COUNT(r.RID) AS RECIPIENT_COUNT  
  
FROM BLOOD b  
  
LEFT JOIN DONOR d ON b.BID = d.DID  
  
LEFT JOIN RECEIVER r ON b.BID = r.BBID  
  
GROUP BY b.BLOOD_GROUP;
```

Output

1 queries executed, 1 success, 0 errors, 0 warnings

Query: CREATE VIEW DONOR_COUNT AS SELECT b.BLOOD_GROUP, COUNT(d.DID) AS DONOR_COUNT, COUNT(r.RID) AS RECIPIENT_COUNT FROM BLOOD b LEFT ...

0 row(s) affected

Execution Time : 0.003 sec
Transfer Time : 1.011 sec
Total Time : 1.014 sec

AI

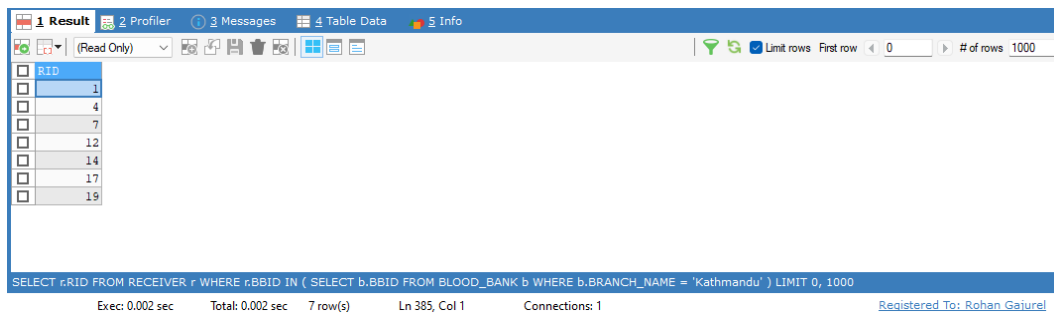
Exec: 0.003 sec Total: 1.014 sec Ln 368, Col 1 Connections: 1 Registered To: Rohan Gaiurel

3.5. SUBQUERY

3.5.1. Select using Subquery

```
SELECT r.RID  
  
FROM RECEIVER r  
  
WHERE r.BBID IN (  
  
    SELECT b.BBID  
  
    FROM BLOOD_BANK b  
  
    WHERE b.BRANCH_NAME = 'Kathmandu'  
  
);
```

Output



RID
1
4
7
12
14
17
19

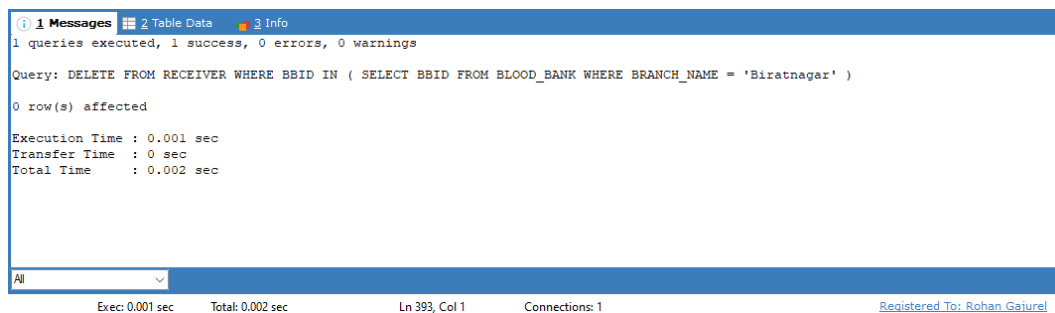
SELECT r.RID FROM RECEIVER r WHERE r.BBID IN (SELECT b.BBID FROM BLOOD_BANK b WHERE b.BRANCH_NAME = 'Kathmandu') LIMIT 0, 1000

Exec: 0.002 sec Total: 0.002 sec 7 row(s) Ln 385, Col 1 Connections: 1 [Registered To: Rohan Gaijarel](#)

3.5.2. Delete using Subquery

```
DELETE FROM RECEIVER  
  
WHERE BBID IN (  
  
    SELECT BBID  
  
    FROM BLOOD_BANK  
  
    WHERE BRANCH_NAME = 'Biratnagar'  
  
);
```

Output



The screenshot shows a database interface with a blue header bar containing '1 Messages', '2 Table Data', and '3 Info'. The main area displays the following text:

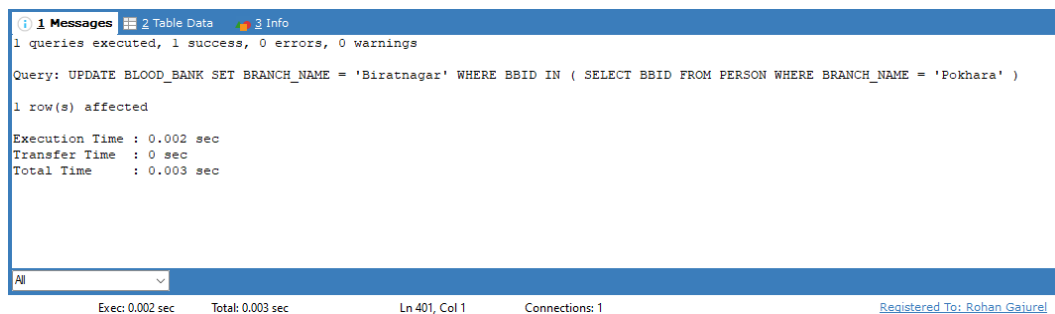
```
1 queries executed, 1 success, 0 errors, 0 warnings  
  
Query: DELETE FROM RECEIVER WHERE BBID IN ( SELECT BBID FROM BLOOD_BANK WHERE BRANCH_NAME = 'Biratnagar' )  
  
0 row(s) affected  
  
Execution Time : 0.001 sec  
Transfer Time : 0 sec  
Total Time : 0.002 sec
```

At the bottom, there is a status bar with a dropdown menu set to 'All'. To the right of the dropdown, it shows 'Exec: 0.001 sec', 'Total: 0.002 sec', 'Ln 393, Col 1', and 'Connections: 1'. On the far right, there is a link that says 'Registered To: Rohan Gaiurel'.

3.5.3. Update using Subquery

```
UPDATE BLOOD_BANK  
  
SET BRANCH_NAME = 'Biratnagar'  
  
WHERE BBID IN (  
  
    SELECT BBID  
  
    FROM PERSON  
  
    WHERE BRANCH_NAME = 'Pokhara'  
  
) ;
```

Output



The screenshot shows a database client interface with a blue header bar containing tabs for '1 Messages', '2 Table Data', and '3 Info'. The 'Messages' tab is active, displaying the following text:

```
1 queries executed, 1 success, 0 errors, 0 warnings  
  
Query: UPDATE BLOOD_BANK SET BRANCH_NAME = 'Biratnagar' WHERE BBID IN ( SELECT BBID FROM PERSON WHERE BRANCH_NAME = 'Pokhara' )  
  
1 row(s) affected  
  
Execution Time : 0.002 sec  
Transfer Time : 0 sec  
Total Time : 0.003 sec
```

Below the message pane, there is a status bar with a dropdown menu set to 'All'. To the right of the dropdown, the status bar displays: 'Exec: 0.002 sec', 'Total: 0.003 sec', 'Ln 401, Col 1', 'Connections: 1', and a link 'Registered To: Rohan Gaiurel'.